



International Society for the History and Bibliography of Herpetology



LEVITICI Cap. XI. v. 30. III. Buch Nost. Cap. XI. v. 30.
Ennac. Stellio, Viverr. Chamæl. Salamandra. Dael. St. Cyder. Stis, Chamæl, Salamander.



International Society for the History and Bibliography of Herpetology

The **ISHBH** is a not-for-profit organization established to bring together individuals for whom the history and bibliography of herpetology is appealing and to promote the knowledge of related topics among members and the general public. Membership is open to anyone who shares the aims of the society.

Membership. The biennial fee for 2003–2004 is US \$30, Institutions US \$50 and Life Membership US \$300. This fee includes a subscription to the society's biannual Newsletter and Bulletin (members can obtain back issues for \$7.50 each). Payment can be made with a personal check or a money order drawn on a US bank. Please submit the payments to our postal address below. In the EU and elsewhere you may pay the USD corresponding amount in EUR or SEK. From EU countries: IBAN: SE83 9500 0099 6042 0455 1206, BIC: NDEASESS. From elsewhere: Account No. 455120-6 with Postgirot, Stockholm, Sweden, Swift: NDEASESS. For any other method of payment please contact us first.

Members are encouraged to contribute with articles, news of meetings, hints on antiquarian trade, book reviews or participate in a literature exchange forum. The society organizes seminars, visits to libraries, museums, research stations, etc. in connection with herpetological meetings with international participation. The society works to facilitate informal contacts among members so that the members can meet, offer support in knowledge and transact exchanges of literature and ephemera.

Formal application for membership shall be directed to the chairperson and should be addressed: International Society for the History and Bibliography of Herpetology (ISHBH), Box 2123, SE-220 02 Lund, SWEDEN.

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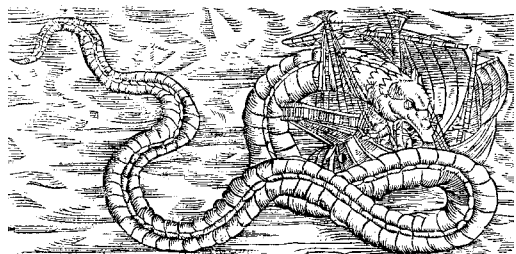
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Instructions for Authors

Authors submitting a manuscript do so on the understanding that the work has not been published before and is not being considered for publication elsewhere. All manuscripts are peer reviewed. Each issue of the Newsletter and Bulletin of the ISHBH is submitted to BIOSIS (U.K.) so that articles can be indexed for inclusion in the Zoological Record.

All manuscripts should be submitted in electronic form and preferably in Rich Text Format (*.rtf). If the manuscript is sent as a text file it should be accompanied by a hard copy to clarify formatting. We prefer to receive manuscripts as an e-mail attachment but manuscripts may also be sent by post on a 3 1/2 inch diskette. Include exact details on name(s) of the author(s) and file(s) submitted (diskettes should be labeled with this information), as well as contact information. The language of the Newsletter and Bulletin is English. British English or American English spelling and terminology may be used, but either one should be used consistently throughout the article. Consult the latest issue of the Newsletter and Bulletin for article format. The Editor reserves the right to adjust style to maintain uniformity.

Illustrations should also be submitted in electronic form. Considering the often delicate nature of illustrations in antiquarian books we feel that it is best that the owner of the work makes arrangements for scanning. However, you should contact the Editor first for advice. Color illustrations can be included but incur extra costs which will be at the author's expense. Illustration files can be sent on a CD-ROM, 100 Mb Zip cartridge, a 3 1/2 inch diskette or transferred over the Internet (contact the Editor first). Hard copies may in certain cases be submitted to the Editor for scanning but the Editor must be contacted first. The ISHBH cannot take responsibility for material sent by post.



A "Sea serpent" from Edward Topsell's (1608)
The Historie of Serpents

Society News

Message from the Chairperson

The meeting in St. Petersburg, Russia.

St. Petersburg was the assembly point for the 2003-Business meeting of ISHBH. Seven members of the Society, including those new members who signed up at the meeting, attended the main venue, the congress of the Societas Europaea Herpetologica. The organizing committee and the Society arranged a well-received workshop on the history of herpetology with four speakers and one poster next to the meeting hall in the Zoological Institute of the Russian Academy of Sciences. The presentations included information about the life and herpetological work of Linnaeus (R. Wahlgren), the history of herpetology at the Zoological Institute in St. Petersburg (N. Ananjeva), the life of Alexander Koenig and his family in St. Petersburg (N. Ivanova), the French confiscation of herpetological collections during the First Republic and Empire (A. Bauer and P. Daszkiewicz), and the 100th anniversary of the birth of two great Russian herpetologists, Sergius Chernov and Paul Terentjev (N. Ananjeva and I. Danilov). A business meeting followed the session, at which the treasurer's report for 2002 was approved and the current officers were granted freedom of responsibility. It was announced that the next ISHBH meeting would be held in conjunction with the joint meeting of the Herpetologists' League, Society for the Study of Amphibians and Reptiles, and the American Society of Ichthyologists and Herpetologists, in Norman, Oklahoma, USA in May 2004.

Following the workshop, the group had been invited for a special display of the herpetological collections of the Institute's world famous library. It was a stunning experience. The Library of the Zoological Institute of St. Petersburg holds

about about 540,000 items including a wealth of herpetological books of historical significance. On the table was a dozen unique books, among them Christopher Gottwald's atlas (1714) *Museum Gottwaldianum* with several folded plates of chelonians, known from three copies only, Johann Walbaum's *Chelonographia* (1782), and both a colored and an uncolored version of Albertus Seba (1734, vol. 1) *Locupletissimi rerum naturalium thesauri* for the viewers to compare and appreciate the quality of both states of illustration. We thank the librarians, Mrs. Ludmila Grozdilova and Mrs. Julia Dunaeva, and their colleagues for the opportunity given to audience to view part of this remarkable library.

Time to renew membership

This issue marks the end of the 2001 and 2002 membership period. At the closing of the period we had 110 members from North America, Asia, and Europe including also several libraries. We now look forward to a new inspiring period of enlightening further aspects on the history and bibliography of herpetology. We shall continue to publish contributions to the publishing history of herpetology and papers with allied subjects as well as monitor the discipline for events and news. Your continued membership is vital for the Society's pursuits. Not only stay with us but also make our existence known to your corresponding colleagues. With the forthcoming membership of period 2003 and 2004 comes two volumes, typically with two issues each, of the Newsletter and Bulletin. As for meetings we will gather in Oklahoma, USA in the summer of 2004. Find out more in the forthcoming Newsletters or on our web site.

Richard Wahlgren, 2003–10–07

Other News

Robert Gordon library on SSAR Internet auction

In the Newsletter & Bulletin Vol. 2(1) for 2000 under Other News I reported on the result of the

postal auction of the late Professor Joseph R. Bailey's Herpetological Library that was concluded on February 1 in the same year. The library had been donated to the Society for the

Study of Amphibians and Reptiles (SSAR). Bailey's auction realized an impressive US\$16,000 for SSAR's activities.

Earlier this year, another outstanding personal library with mainly herpetological items went on an SSAR auction, that of the late Robert Edward Gordon (1925–1996). The Robert E. Gordon Endowment for the support of book-length publications by the SSAR was set up from the proceeds of this auction. Bob Gordon spent from 1958 his professional career at the University of Notre Dame, Indiana. His research publications between 1949 and 1968 dealt with the life histories, ecology and homing behavior of salamanders as well as the behavioral ecology of the rainbow snake.

During the Bailey auction the participants mailed in their bids in advance and the winner paid the bid amount regardless of the tendered amount of the second bidder. This time the Internet was used for an auction floor. The web site BiblioBid.com is operated by Bibliomania who also administrates SSAR's selling of new books. Just as in any normal interacting floor auction the winner in this auction just pays a certain increment higher than the bid of the second highest. There were 405 lots with books, mostly herpetological. In all, they realized \$18,293.79 but there is a parallel stamp auction, also with many herpetological lots, still continuing and the proceeds from this part of the auction are not included in the figure.

Just let me say a little about the auction results as the realized prices should provide a good bearing of the current price level of secondhand herpetological books. Certainly some individuals were prepared to pay substantial amount for scarce titles. The highest bid was reached for Ikio Sato (1943) *A Monograph of the Tailed Batrachians of Japan* with a hammer price of US\$893, a notable amount for quite a modern book. R. Buddle (1929) *Snakes of Singapore Island* is just a 12mo soft cover booklet of about 52 pages published in Singapore. The starting price was a modest \$20. Two dedicated book collectors were outbidding each other until the

\$300 level was reached, an extraordinary price for a tiny albeit obscure publication. The books in the celebrated *Biology of the Reptilia*-series edited by Carl Gans et al. were auctioned individually from volume 1 (1969) to volume 16 (1988). The typical antiquarian price has lately been slightly above \$100 each for these. Volume 2 to 4 (1970–1973) sold here for \$180 each but volume 6 (1977) dealing with morphology went up to \$325 and No. 7 (1977) on ecology and behavior escalated to an incredible \$365. Volume 15 (1985) treating development went for a comparable low \$40.

Ch'eng-chao Liu (1950) *Amphibians of Western China* is a large folio format book published in a Fieldiana series in Chicago. The lonely bidder had no competition and it was sold at the minimum price of \$110, a good deal. Albert H. Wright and Anna A. Wright (1962) *Handbook of Snakes of the United States and Canada, Volume III, Bibliography* was privately printed in a small edition and distributed among colleagues by the authors. It is indeed a scarce item in the 1st edition and went for \$186. SSAR reprinted the book (1979) but this was sold here for a mere \$10. Can it be demonstrated more clearly how important a 1st edition can be to collectors?

There were examples of how the thrill, or maybe the "good cause", of an auction can bring prices higher than they are available for on the Internet market. W. Gardner Lynn and Chapman Grant (1940) *The Herpetology of Jamaica* went for \$135 but is now available for \$100. Norman Hedges (1983) *Reptiles and Amphibians of East Africa* could at one time be bought for about \$2 in Nairobi, Kenya but went for \$47.50 at the auction. There are three copies available on the Internet for between \$22 and \$26.

Gordon was a keen stamp collector and a large amount of postal stamps, many with herpetological themes, is being sold on the same auction. This part of the auction is still open at www.bibliobid.com.

Richard Wahlgren

About the Cover

Johann Jakob Scheuchzer and the *Physica sacra*

Johann Jakob Scheuchzer (1672–1733) was a physician, scholar, and naturalist from Zurich, Switzerland. His early discoveries of fossils earned him the appellation “Father of Paleontology”, although he considered the occurrence of marine remnants in the Swiss Alps as testimony of the Biblical Flood. As was typical for the time, he believed that the Old Testament provided a precise description of the development of the earth and its natural history objects. He published works on several different disciplines, including: numismatics, botany, zoology, and geography but his magnum opus was the monumental four volume work that is customarily called *Physica sacra* or *Kupfer Bibel* (Copper Bible) but the more complete German title being *Kupfer-Bibel, in welcher die Physica sacra, oder geheiligte Natur-Wissenschaft derer in heil. Schrift vorkommenden natürlichen Sachen, deutlich erklärt und bewahrt...* (Augsburg 1731–1735). This is a work that encompasses the biblical texts in a scientific context with an emphasis on natural and human history. It is in folio (26 by 42 cm at least), written in Latin and translated into German, French and Dutch, with the text consisting of more than 2,000 pages. It was profusely illustrated with 750 numbered full-page copper engravings, some of them on double leaves. Scheuchzer is best known to herpetologists for his published description (1726) of a fossilized skeleton of a Miocene giant salamander found in the Swiss Alps, which he interpreted as the remains of a man that had drowned in the Flood some 4,000 years earlier. Scheuchzer appropriately named the discovery *Homo diluvi testis* (Man, a witness to the Deluge). It is illustrated in *Physica sacra* on plate No. 49. In 1837 J. J. Tschudi (1818–1889) re-described it giving it, to honor Scheuchzer and his opinion of its origin, the name it still has, *Andrias scheuchzeri*, *Andrias* meaning “Image of man”.

The picture on the cover, plate No. 262 in *Physica sacra* is an illustration for Leviticus 11, v. 30 of the Old Testament. The Lord addresses Aaron and Moses of which animals are clean and unclean, which can be eaten and which shall be avoided by all means. The animals portrayed according to Scheuchzer are “Erinac, Stellio, Viverr, Chamæl. Salamandra”. These names have been adopted in modern nomenclature: hedgehog family Erinaceidae, rainbow lizard *Laudakia stellio*, civet family Viverridae and chameleon family Chamaeleontidae. In verses 29 and 30 the Lord says “And these are they which are unclean unto you among the creeping things that creep upon earth; the weasel, and the mouse, and the great lizard after its kind, and the gecko, and the land-crocodile, and the lizard, and the sand-lizard, and the chameleon”. The translators of the Bible text have had a hard time identifying the animals originally described in the Hebrew language and there are several uncertainties expressed in the footnotes of modern bibles. Different versions and languages of the Bible actually list quite divergent kinds of animals. The original image size (border) is 285 by 193 mm.

Physica sacra is also relevant to herpetologists for the 66 spirit-preserved snakes illustrated on 24 plates, all engraved with a strikingly high quality. These specimens were from the Linck family’s collection of curiosities. The founder of the Linck Naturalienkabinett was Heinrich Linck (1638–1717) from Leipzig. His son Johann Heinrich Linck the Elder (1674–1734) continued his father’s pursuit and his son, Johann Heinrich Linck the Younger (1734–1807) prepared a three-volume catalogue of the collection, the *Index musaei Linckiani*, Leipzig 1783–1787, in which 191 serpentine specimens are listed. Johann Heinrich Linck the Younger had no heirs at his death. In 1840 Prince Otto Viktor

I von Schönburg-Waldenburg bought the collection. It now forms part of the “Heimatmuseum und Naturalienkabinett” in Waldenburg, Germany. The museum actually still holds 41 snakes although it is uncertain if they derive from the original Linck collection.

The snakes in *Physica sacra* are reproduced as illustrative objects of various places in the Old and New Testament where a snake has been mentioned in any context or as a metaphor, e.g. Isaiah 11, v. 8 “And the sucking child shall play on the hole of the asp” or Amos 5, v. 19 “As if a man did flee from a lion, and a bear met him; or went into the house and leaned his hand on the wall, and a serpent bit him”.

On the rear inside cover we have reproduced plate No. 629 with five snakes. According to Scheuchzer it is an illustration for Jeremiah 51, v. 34, which deals with an uprising against Babylon, the land of the Chaldeans: “Nebuchadrezzar the king of Babylon hath devoured me [or us], he hath crushed me, he hath made me an empty vessel, he hath swallowed me like a dragon...”. In many places of the older literature the mythological dragon was synonymized with the snake and this is, indeed, what Scheuchzer is doing here.

Physica sacra is sometimes available on the antiquarian market. A Dutch dealer had earlier this year on the shelves a copy of the Dutch edition selling for Euro 10,000. The illustrations in *Physica sacra* were probably not intended for coloring. However, another Dutch antiquarian dealer marketed a German version

in 2002 and 2003. It is described as “colored by an early hand,” thus pointing out the coloring is old but not necessarily intended by the author. It is priced at Euro 25,000.

Acknowledgement. My thanks go to Mrs. Ulrike Budig, Museum Associate at Museum Waldenburg for information of the museum collection.

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Richard Wahlgren

On the Dates of Publication and Correct Citation of Olivier's *Voyage dans l'Empire Othoman* and its Herpetological Content

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Introduction

Olivier's *Voyage dans l'Empire Othoman* (Fig. 1) is one of the great travel narratives of early European expeditions to the Near and Middle East. The work was published in three parts beginning in 1801, with the

last portion being published in 1807. Within a decade of its original appearance in French it was translated and published in English (1801; first part only published), German (1802–1808), Dutch (1809–1813), and Italian (1816). All versions of the work appear to be uncommon and only eleven copies are listed in American institutional libraries by *The National Union Catalogue of Pre-1956 Imprints*. To our knowledge, only two examples of the work have appeared in the antiquarian book trade in the last 40 years. The work is of herpetological interest because of eight species of reptiles referred to by Latin name in the text. Of these, six are original descriptions, representing one snake, four lizards, and one turtle. Although the number of species mentioned is small, all are common and widespread taxa and are cited frequently in faunal works and in the systematic literature in general.

Unfortunately, Olivier's work is often miscited and contradictory citations for the same species name are common. Given both the rarity of the publication and the errors in citation we conclude that few modern authors who have cited the work have actually examined it. We take this opportunity to provide some background to the work, information regarding its dating, and reproduce the herpetological sections with correct page and volume references.

Olivier's Life and Work

Guillaume Antoine Olivier (1756–1814) (Fig. 2) was a French naturalist known chiefly for his contributions to entomology. Olivier was born

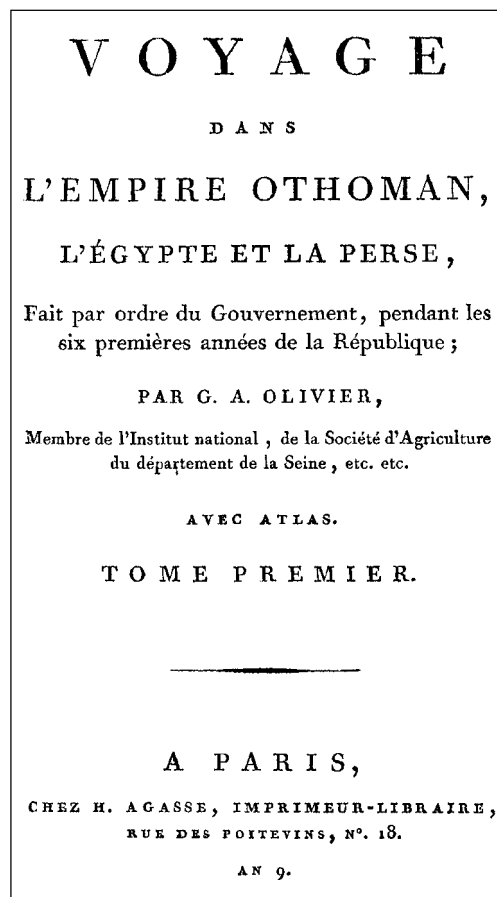


Figure 1. Title page of the first volume of the octavo edition of *Voyage dans l'Empire Othoman*.

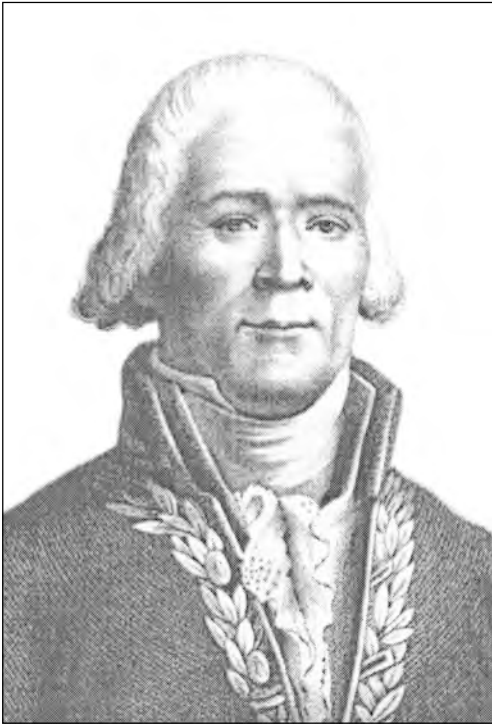


Figure 2. Guillaume Antoine Olivier (1756–1814). Portrait from the collection of Kraig Adler.

at Arcs, near Toulon and studied at the University of Montpellier, earning a doctorate in medicine. In 1792, he and Jean Guillaume Bruguière (1750–1798) were sent as naturalists on an expedition sponsored by the young French Republic to the Ottoman Empire, which at the time extended over much of the Middle East. After delays in the south of France, they departed for Constantinople by ship in early 1793 but were promptly interrupted in Bosnia and, impatient of waiting for new authorization to proceed, they ultimately continued on their travels without state financial backing or official protection.

They traveled to Egypt, Syria, Mesopotamia (Iraq), Persia (Iran), Cyprus, and Greece as well as Turkey itself. Bruguière died in Italy en route home, but Olivier returned to France in 1798, six years after having been dispatched from Paris. Following his return, Olivier published the narrative of his voyage, in which he described numerous animals collected and ob-

served on his travels. He was named a member of the Institute de France in 1800 and was appointed Professor of Zoology in the Veterinary School at Alfort (now the École Nationale Vétérinaire d'Alfort in the town of Maisons-Alfort), just outside Paris. Although his published herpetological contributions are limited to those in *Voyage dans l'Empire Othoman*, Olivier was a patron of Pierre-André Latreille (1762–1833) from 1810 until Olivier's death in 1814 (Essig 1931; Bonnet 1945; Damkaer 2002).

Alternate Versions of *Voyage dans l'Empire Othoman*

Part of the confusion over the correct citation of Olivier's names stems from the fact that two editions of *Voyage dans l'Empire Othoman, l'Égypte et la Perse, Fait par ordre du Gouvernement, pendant les six premières années de la République* were published, apparently simultaneously (see below). One is a large format (26 cm tall) quarto (4^{to}) edition in three volumes and the other is a smaller (20 cm tall) octavo (8^{to}) edition in six volumes. Seven of the 11 institutional copies in the United States are of the octavo set, whereas the remainder are of the quarto version. These versions are virtually identical in content, differing only in minor points of font style and punctuation, all almost certainly originating from issues associated with printing rather than reflective of changes made by the author. At least regarding the herpetological portions of the text, none of the minor differences appear to represent corrections or updates. Corresponding parts of the quarto and octavo editions bear the same dates: "IX" for volume I of the quarto edition and volumes I–II of the octavo, "XII" for volume II (quarto) and III–IV (octavo), and "1807" for the final volume(s) [the French Republican calendar, using Roman numeral dates starting from the year II (= 1793; the first year of the Republic had already passed prior to the adoption of the calendar) was in use at the time of publication of the initial volumes, but had been abandoned after XIV (1805)]. Both editions were pub-

lished by H. Agasse in Paris (see References for complete bibliographic citations).

The illustrations accompanying the text are uncolored engravings and were produced in only a single version, a large quarto atlas entitled *Atlas pour servir au Voyage dans l'Empire Othoman, l'Égypte et la Perse, Fait par ordre du Gouvernement, pendant les six premières années de la République*, also published by H. Agasse in Paris. This was published in three parts, or livraisons, corresponding to the three volumes of the quarto edition, as follows:

Première Livraison

Year of publication: "An IX" (1801)

Plates included: 1–17. One herpetological plate (Pl. 16; here reproduced as Fig. 3) with the text legend "REPTILES DE L'ARCHIPEL. La figure 1 représente le Scinque ocellé, qui se trouve en Crète, en Chypre, en Égypte. Il est de grandeur naturelle. La figure 2 représente un Boa de grandeur naturelle, trouvé à Polino, à Naxos: *A* le fait voir en dessus, et *B* en dessous." The plate itself is labeled "REPTILES DES ÎLES DE L'ARCHIPEL."

Deuxième Livraison

Year of publication: "An XII" (1804)

Plates included: 18–33. One herpetological plate (Pl. 29; here reproduced as Fig. 4) with the text legend "Pl. 29. LÉZARDS. Fig. 1. Scinque rayé, *Scincus vittatus*; d'Égypte. Fig. 2. Agame agile, *Agama agilis*; des environs de Bagdad, Fig. 3. Agame rude, *Agama rudrata*; des environs de Bagdad, de la Mésopotamie, du nord de l'Arabie et de la Perse." The plate itself is labeled "LÉZARDS d'Égypte et de Babylonie."

Troisième Livraison

Year of publication: "1807"

Plates included: 34–50. Two herpetological plates (here reproduced as Figs. 5–6). The first is accompanied by the text legend "Pl. 41. TORTUE de l'Euphrate et du Tigre. Fig. 1. Partie supérieure. Fig. 2. Partie inférieure." and is labelled "TORTUE DE L'EUPHRATE. *Testudo Rafcht*." The second has the text legend "Pl. 42, fig. 1. LÉZARD trouvé près d'Ispahan. Il appartient au genre AGAME." and appears on a plate containing various arachnids and bearing the caption "AGAME. SCORPION. GALÉODES."

Dating of *Voyage dans l'Empire Othoman*

A "Décret concernant les Contrefacteurs" (a warning to potential pirates of the work) from the publisher appears on p. ii of volume I (only) of both the quarto and octavo editions of *Voyage dans l'Empire Othoman*. This is dated "21 floréal an 9" (11 May 1801) and establishes a "no earlier than" date for the publication of the work. An announcement of the publication of the first part of Olivier's work appeared in *Magasin Encyclopédique ou Journal des Sciences, des Lettres et des Arts*, VII^e Année, Tome I^{er} dated "an IX - 1801." This journal was published in volumes of six numbers each, each bearing both the French Republican year and the standard year date. All issues from VI(5) to VII(6) bear the year date 1801. The copies of the journal to which we had access (at the Ewell Sale Stewart Library, Academy of Natural Sciences, Philadelphia) had no receipt stamps or wrappers that might have provided more detail as to the exact date of publication. However VI(6) specifically mentions scientific meetings that occurred at least as late as 9 Germinal IX (30 March 1801), in the seventh month of the Republican year, and presents summaries of events of the second trimester of year IX (through the end of Floréal), whereas events of 30 Germinal IX (20 April 1801) through at least 4 Messidor IX (23 June 1801) are noted in VII(1). This information would support the contention that the volume was probably published in early Summer of 1801 and suggests that Olivier's first volume probably appeared in May or June of 1801. The announcement of publication mentions both the quarto (one volume) and octavo (two volume) editions, each of which was issued with a large quarto atlas (Première Livraison) and sold for 16 French francs.

The publication of the second and third installments of the work are noted in *Procès-Verbaux des Séances de l'Académie des Sciences, Paris*. In this case the donation of the work (quarto edition) by Olivier himself is recorded at a particular weekly meeting. It is likely that these

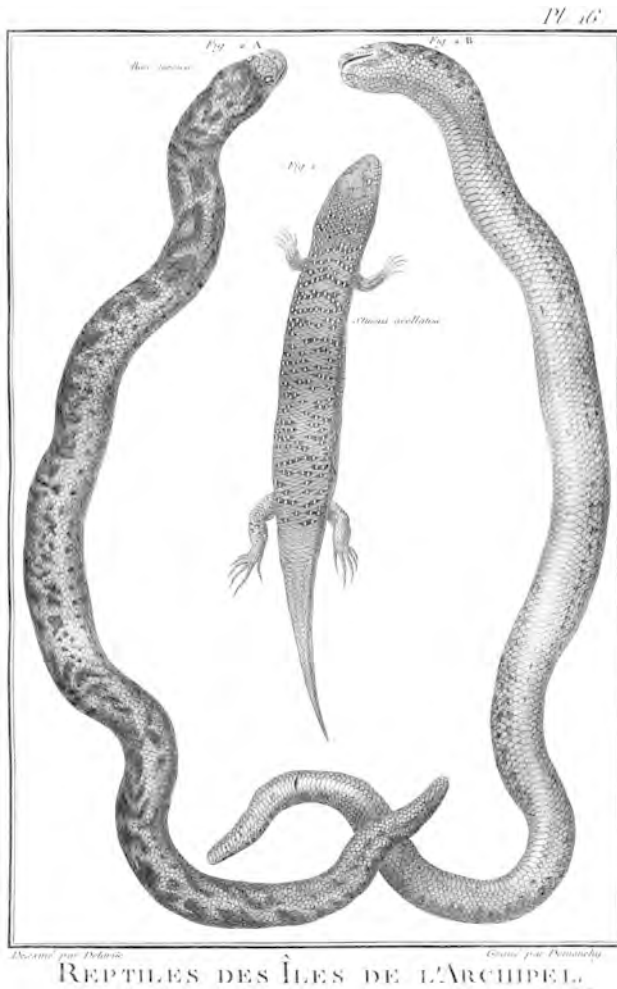


Figure 3. Plate 16 from the *Première Livraison* of Olivier's atlas depicting *Scincus ocellatus* (= *Chalcides ocellatus*) and *Boa turcica* (= *Eryx jaculus*).

dates are very close to the actual publication dates. The presentation of Volume 2 of the quarto edition and the accompanying atlas was noted in the Séance du Lundi, 25 Thermidor, An 12 (13 August 1804) and Volume 3 was noted in the records of the Séance du 20 Avril 1807. Based on this information it would appear that the first part of the work (including the first livraison of the atlas) was published in the first half of 1801, probably in May or June. The second part of the work was almost certainly published in July or early August, but no later than the second week of August, 1804, and the

final part appeared in the first three weeks of April, 1807.

It is unclear if the quarto and octavo editions were truly published simultaneously. However, it is clear that both appeared at approximately the same time and that they were published at approximately the same time as the corresponding livraisons of the atlas. As we find no evidence to suggest that one version preceded the other, we regard citation to either version as correct, but advise future workers to specify which edition is being cited when reference is made to volume and page numbers.

Reptile Accounts

The reptile species discussed by Olivier are: *Boa turcica*, *Scincus ocellatus*, *Lacerta stellio*, *Scincus vittatus*, *Agama agilis*, *Agama rudrata*, *Agame scutellata*, and *Testudo rafcht*. Of these, all but *S. ocellatus* and *L. stellio* are described as new. Below we provide the correct page citations for each species account or description in both the quarto and octavo editions. In cases in which the account spans two or more pages the page on which the name is first used is indicated in square brackets. In addition, the complete French text is reproduced. Olivier introduced new names and associated Latin descriptions in numbered footnotes. The versions presented match the quarto edition; any differences in the octavo edition are listed under "Notes." Subsequent citations of the names and other information not derived from the *Voyage dans l'Empire Othoman* itself are presented under "Remarks."

***Boa turcica* Olivier, 1801**

4^{to}: Tome 1, Ch. XXVIII, p. 329.

8^{vo}: Tome 2, Ch. VIII, pp. 199–200 [200].

Atlas, 1^{ère} Livraison, vi; pl. 16, figs. 2A, 2B

“Le boa (*pl. 16, fig. 2 A. B.*) a le corps cylindrique, d’un gris jaune, marqué de taches noirâtres, nombreuses, irrégulières. La tête est ovale, obtuse; le museau est formé par une écaille triangulaire, large, courte; les deux écailles qui viennent après, sont pareillement larges est courtes: celles qui couvrent le corps, sont petites, rondes, égales, presque hexagones, unies: les abdominales, au nombre de cent soixante-douze, sont courtes et étroites. Les yeux sont petits et enfoncés. La langue est fourchue, et la lèvre inférieure est arrondie. La queue est obtuse, très-courte. Les écailles caudales sont au nombre de vingt-deux (1).

La bouche de ce boa n’est point munie de crochets; ce qui doit le faire placer parmi les espèces qui ne sont point venimeuses.

(1) *BOA turcica griseo-flavescens, cauda brevissima, scutis dorsilibus minimis rotundatis sub hexagonis.*”

Remarks: The figure legend places the type locality of this form as “Polino, à Naxos” [now Políaiagos, Cyclades Islands, Greece]. Schneider (1821) and Boulenger (1893) cited only the figure in the Atlas. Schneider (1821), however, incorrectly cited plate 15 (rather than 16) and gave the type locality as “Insel Cimolus” [Kímolos], a neighboring island. The octavo edition has been cited by Mertens and Wermuth (1960), Stimson (1969), and Tokar (1991), whereas Schreiber (1912) cited the quarto edition. McDiarmid et al. (1999) cited the atlas correctly but gave the text citation as Volume 2, p. 377 [sic!]. Although later workers indicated that the type or types was/were lost (Stimson 1969; McDiarmid et al. 1999), Daudin (1803) noted that he had in his collection a specimen of this species given to him by Olivier himself, implying that at least one specimen survived the return journey to France. The name *Boa turcica* is currently referred to the synonymy of *Eryx jaculus* (Linnaeus, 1758) *vide* Tokar (1991) and McDiarmid et al. (1999), although Tokar (1993) recognized *E. j. turcicus* as a valid subspecies.

***Scincus ocellatus* (Forsskål, 1775)**

4^{to}: Tome 1, Ch. XXXIII, pp. 417–418 [418].

8^{to}: Tome 2, Ch. XIII, pp. 356–357 [357].

Atlas, 1^{ère} Livraison, vi; pl. 16, fig. 1.

“Les lézards n’inspirent pas ordinairement autant de frayeur que les serpents : aucun n’est reconnu venimeux, et cependant on voit établie en plusieurs endroits l’opinion que quelques-uns de ces reptiles sont très dangereux. La première fois que nous avons vu le scinque oculé (*pl. 16, fig. 1*), quelques Grecs qui étaient avec nous, reculèrent d’horreur, comme s’ils avaient aperçu la plus dangereuse vipère. Ce fut bien pis lorsqu’ils nous le virent prendre à la main : ils nous crurent perdus. Nous volûmes les dissuader sur le prétendu venin de ce reptile, en nous laissant mordre : nous ne réussîmes pas. L’ignorant, comme on sait, ne revient pas facilement de son erreur. Ces Grecs se persuadèrent alors, on que nous étions sorciers (car ils croient à toutes les sottises de ce genre), ou que nous connaissions un antidote au venin de cet animal.

Ce scinque vit dans le sable en Crète, en Chypre, en Égypte, et non pas dans les maisons, comme le dit Forskal.

Tout son corps est couvert de petites écailles imbriquées, lisses, luisantes: il est d’un gris jaunâtre en dessous, d’un vert grisâtre en dessus, avec des rangées transversales, obliques, de taches hexagones, noires, marquées chacune d’une petite tache quadrangulaire, blanche. La queue, dans quelques individus, est en proportion plus longue que dans l’espèce figurée, et est marquée des mêmes taches que le corps. Les pieds sont courts; les doigts sont minces, longs et terminés par un ongle bien distinct. Ce scinque court avec assez de légèreté (1).

(1) *SCINCUS ocellatus supra griseo-virescens, maculis nigris hexagonis puncto albo notatis.*

Lacerta ocellata cauda tereti, imbricata, brevi. FORSKAL, *Descript. anim.* pag. 13.

Lacerta ocellata. GMEL. *Syst. nat.* tom. I, pars 3, p. 1077.”

Notes: In the octavo edition, the name Forskal in the footnote is followed by a period.

Remarks: *Scincus ocellatus* was originally described as *Lacerta ocellata* Forsskål, 1775 and is currently *Chalcides ocellatus* (Forsskål, 1775) *vide* Caputo (1993).

***Lacerta stellio* Linnaeus, 1758**4^{to}: Tome 1, Ch. XXXIII, p. 418.8^{to}: Tome 2, Ch. XIII, pp. 357–358 [358].

No illustration.

“Le lézard le plus commun dans toutes les îles de l’Archipel, en Crète, en Morée, sur la côte orientale de la Natolie, en Égypte et en Syrie, c’est le *stellion*, nommé par les Grecs, *cocordilos* [sic] (2). Il a le corps mélangé de gris, de jaunâtre et de brun, la tête et le dos couverts d’écailles simples ou tuberculées et pointues. Les écailles des pieds sont plus relevées et plus pointues que celles du dos. La queue est verticillée et couverte d’écailles épineuses. Ce lézard acquiert jusqu’à dix ou douze pouces de longueur. Il vit d’insectes et ne fait aucun mal. On le voit rechercher le soleil en été: il se tient en hiver dans des trous, et il y passe cette saison dans une sorte d’engourdissement.

(2) Tournef. *Voyage au Lev.* tom. I, p. 313.*Lacerta stellio*. LIN. *Syst. nat.* p. 361, n^o. 10.Le Stellion, LACEPÉD. *Quadr. ovip.* tom. I, p. 369.”

Note: In the octavo edition the names Lin. and Lacedep. are not in small caps in the footnote. Also the footnote itself is numbered (1) rather than (2) due to pagination differences.

Remarks: *Lacerta stellio* is currently recognized as *Laudakia stellio* (Linnaeus, 1758) *fide* Baig and Böhme (1997). According to Brygoo (1988), MNHN 2624, collected by Olivier, is a syntype of *Stellio vulgaris* Latreille in Sonnini and Latreille, 1802.

***Scincus vittatus* Olivier, 1804**4^{to}: Tome 2, Ch. V, pp. 58–59 [59].8^{to}: Tome 3, Ch. V, pp. 102–103 [103].Atlas, 2^{ème} Livraison, vi; pl. 29, fig. 1.

“Nous avons trouvé sur les sables à l’ouest de Rosette, un scinque qu’on ne doit point confondre avec celui à *cinq raies* (1) de l’Amérique septentrionale. (Pl. 29, fig. 1) Il a de huit à dix pouces de long. Tout le corps est couvert de petites écailles imbriquées, disposées en losange: il est d’un gris vert-foncé, luisant en dessus, avec cinq bandes longitudinales jaunes; celle du milieu du dos est plus large et plus foncée que les autres. Les trois supérieures naissent derrière la tête, et vont se perdre au

commencement de la queue: les deux latérales se prolongent sous les yeux, et vont, comme les autres, se terminer à la base de la queue. Le dessous du corps est d’un jaune-sale. Les pattes sont courtes; les doigts sont minces, terminés par un petit ongle crochu. La queue est plus longue que le corps.

Ce scinque (1) court assez vite: il creuse son trou dans le sable.

(1) *Lacerta quinque lineata*. Linn. *Syst. nat.*

(1) *Scincus vittatus*, *suprà* griseo-virescens; vittis quinque flavis, intermedia majori obscuriori; caudâ corpore longiore. Tab. 29, fig. 1.”

Note: In both editions the references to the two footnotes appear on different pages, hence the numbering of both as (1).

Remarks: Duméril and Bibron (1839), Boulenger (1887), and Nikolsky (1915) cited the pagination of the 4^{to} edition. Brygoo (1985) tentatively identified MNHN 197 (2791) from “Égypte” as the holotype (based in part on Guibé’s [1954] listing) and provided the pagination for both editions. Leviton et al. (1992) cited the octavo edition, giving the correct page number but the wrong volume. These authors, however, also noted Boulenger’s (1887) alternative citation, stating that two editions existed. Anderson (1999) gave the citation 1804:103 in the synonymy of the species, but gave 1807, volume 10 [!] in his literature cited, along with a notation that the work had not been seen. This species has long been known as *Mabuya vittata* (e.g., Leviton et al. 1992). Mausfeld et al. (2002), however, partitioned the genus *Mabuya*, placing the clade including this species in the genus *Euprepis*. More recently Bauer (2003) demonstrated that the name *Trachylepis* should be applied to this group, thus the current name of this taxon is *Trachylepis vittata* (Olivier, 1804).

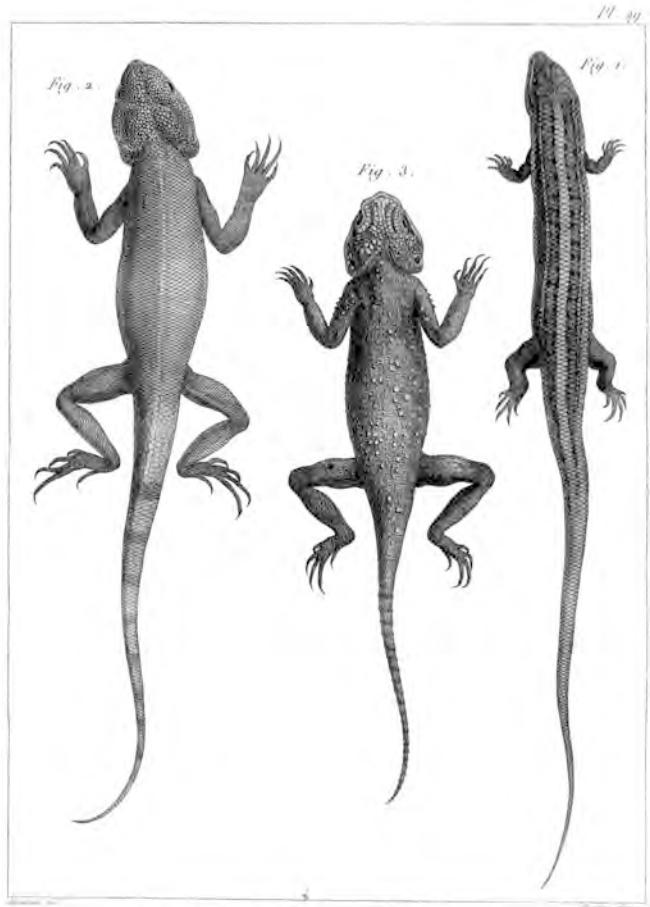
Agama agilis* Olivier, 1804**4^{to}: Tome 2, Ch. XIV, p. 428.8^{to}: Tome 4, Ch. XIV, pp. 394–395 [394].Atlas, 2^{ème} Livraison, vi; pl. 29, fig. 2.Agama rudrata* Olivier, 1804**4^{to}: Tome 2, Ch. XIV, pp. 428–429 [429].8^{to}: Tome 4, Ch. XIV, pp. 395.Atlas, 2^{ème} Livraison, vi; pl. 29, fig. 3.

“Nous avons trouvé dans ces contrées un grand nombre des lézards, un entre autres plus long et plus gros que le bras d'un homme; il se fait dans les champs un terrier semblable à celui d'un renard: nous en avons préparé deux individus que nous avons perdus. Nous avons été plus heureux pour les espèces que nous avons mises dans l'eau-de-vie de dattes: elles s'y sont très-bien conservées. La première espèce (Pl. 29, fig. 2) est assez rare: nous ne l'avons vue que sur les arbustes des environs de Bagdad (1). Elle se nourrit d'insectes, et nous a paru être de la plus grande agilité: elle appartient au genre agama.

L'autre espèce (Pl. 29, fig. 3) est très-commune en Perse et au nord de l'Arabie. Elle fait son trou dans la terre, et court à sa surface avec assez d'agilité pendant la forte chaleur du jour, mais le matin nous la trouvions quelquefois dans une sorte d'engourdissement qui ne lui permettait pas de se sauver. Elle appartient au même genre que la précédente (1).

(1) *Agama agilis, squammis dorsalibus carinatis, ventralibus simplicibus*. Tab. 29, fig. 2. Elle est d'un gris-jaunâtre, un peu mélangée d'obscur: ses écailles sont petites, irrégulières sur la tête, rhomboïdales sur le corps; celles du dos et de la queue ont une ligne élevée, qui se prolonge en angle aigu, et se termine en une pointe beaucoup plus marquée sur le cou. Les écailles du ventre sont lisses.

(1) *Agama rudrata, grisea, fusco maculata, squammis dorsalibus inaequalibus quibusdam verrucosis*. Tab. 29, fig. 3. Elle est d'un gris-clair, nuancé d'un gris nébuleux. La tête et tout le dessus du corps sont couverts d'écailles de grandeur inégale, dont quelques-unes, plus grandes et plus élevées, ressemblent à de petites



LÉZARDS d'Égypte et de Babylone.

Figure 4. Plate 29 from the *Deuxième Livraison* of Olivier's atlas depicting three of the four taxa described by Olivier and still considered valid. Left to right: *Agama agilis*, *A. rudrata*, and *Scincus vittatus*, now transferred to the genera *Trapelus* and *Trachylepis*.

verrues. Les écailles de la queue ont une ligne élevée au milieu; celles du ventre sont simples, rhomboïdales, un peu terminées en pointe.

La langue de ces deux espèces est grosse, courte et arrondie.”

Notes: In the octavo version, the parentheses surrounding the plate references in the body of the text are replaced by commas.

Remarks: Boulenger (1885) incorrectly cited the page (438) on which *Agama agilis* was described, but gave the correct citation from the quarto edition for *A. rudrata* as well as the correct atlas figures for both taxa. Guibé (1954) cited the quarto pagination for *A. rudrata* and the octavo pagination for *A.*

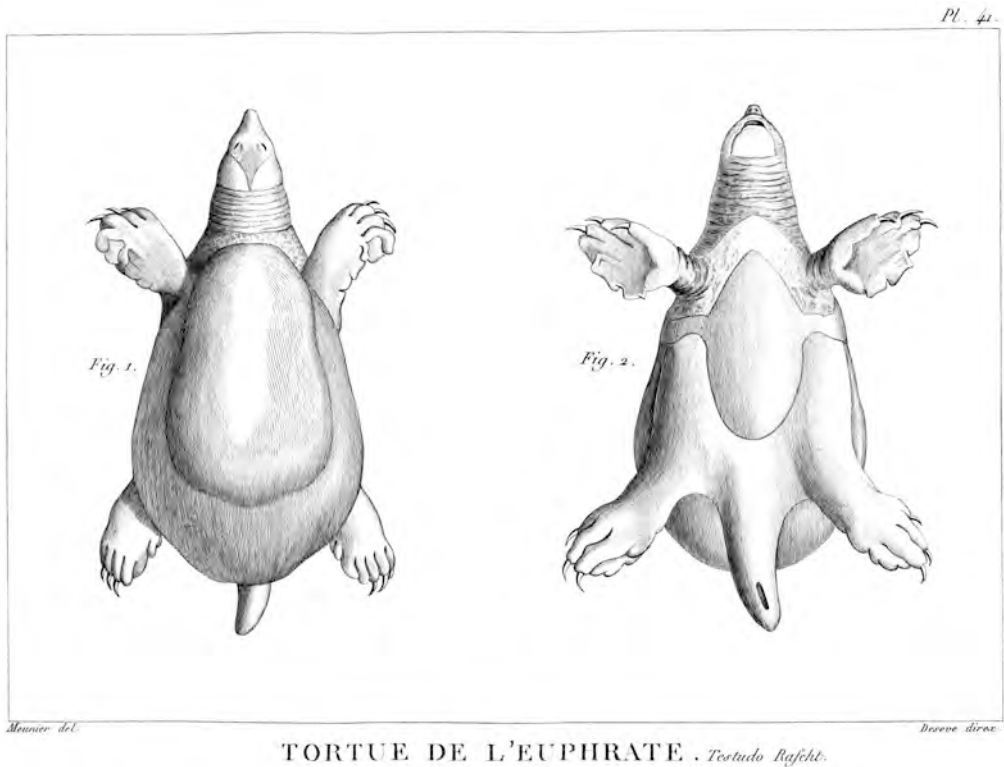


Figure 5. Plate 41 from the *Troisième Livraison* of Olivier's atlas showing the Euphrates turtle, *Testudo rafsch* (= *Rafetus euphraticus*).

agilis, while citing volume four (the octavo volume) for both. Brygoo (1989) provided pagination from the 4th edition whereas Wermuth (1967), Leviton et al. (1992), Rastegar-Pouyani (1998), and Anderson (1999) provided pagination for the 8th. As with *S. vittatus*, Anderson's (1999) literature citation of the year and volume of Olivier's descriptions of Persian taxa are incorrect. Current names for *Agama agilis* and *A. ruderata* are *Trapelus agilis agilis* (Olivier, 1804) and *Trapelus ruderatus ruderatus* (Olivier, 1804), respectively, *fide* Leviton et al. (1992). Brygoo (1989) identified the syntypes of the former species as MNHN 5708 and 5708A [the latter since renumbered as 1994.1178 *fide* Rastegar-Pouyani (1999)], both from "Bagdad," and a surviving syntype of the latter as MNHN 2610, catalogued as originating from "Arabie." As noted by Brygoo (1989), the earlier reference to this specimen as a holotype by Guibé (1954) constituted an implicit lectotype designation under the rules of zoological nomenclature then in effect. Rastegar-Pouyani (2000) provided a photograph of this specimen, which he incorrectly identified as the holotype, rather than lectotype. He also restricted the type locality of this species to

"southwestern Iran: Bushehr Province: between Bandar-e-Ganaveh-Borazjan (50°45' E, 29°35' N)" and provided evidence that the lectotype was in fact referable to the taxon conventionally known as *Trapelus persicus* (Blanford, 1881). Thus, populations formerly regarded as *T. persicus* should now be called *T. ruderatus*, whereas those formerly assigned to *T. ruderatus* are correctly named *T. lessonae* (De Filippi, 1865). Rastegar-Pouyani (1999) rejected Baghdad as the type locality of *A. agilis* and instead designated "the east central regions of the central Iranian Plateau" as the type locality on the basis of the similarity of specimens from this region to the type.

***Agama scutellata* Olivier, 1804**

4th: Tome 3, Ch. VI, pp. 110–111 [110].

8th: Tome 5, Ch. VI, pp. 196–197 [196].

Atlas, 3^{ème} Livraison, v; pl. 42, fig. 1.

"Nous aurions pu prendre de là une esquisse de la ville et de ses environs si nous avions eu nos crayons et nos pinceaux, si nous ne nous

étions pas arrêtés trop long-tems, au pied de la montagne, pour ramasser des graines, et pour courir après un petit lézard qui nous parut fort singulier: on eût dit qu'il portait un écusson sur le dos. Nous l'avons représenté *pl. 42, fig. 1* (1); il est du genre agame. Tout son corps en dessus est d'une couleur noirâtre tirant sur le bleu, avec une grande tache sur le dos, d'un gris un peu fauve. La queue a des anneaux alternes noirs et blancs. Il courait par terre avec agilité, et n'était point facile à prendre.

(1) *Agame scutellata fusca, dorso cinereo-rufescente; caudâ nigro alboque annulatâ*. (*Pl. 42, fig. 1*).

Remarks: Brygoo (1989) provided pagination for the 4th edition whereas Wermuth (1967) provided pagination for the 8th. Guibé (1954), who cited the volumes and pagination of both editions correctly, referred to this specimen as a holotype, whereas Brygoo (1989) considered it one of a syntype series. If indeed there were more than one specimen in the type series, Guibé's action would constitute an implicit lectotype designation. Type locality is Mt. Sophia or Sophissar (between Ferabad and Ispahan). Current name *Phrynocephalus scutellatus* (Olivier, 1807) *vide* Anderson (1999). The holotype is MNHN 6947, which is entered in the MNHN catalogue only with the imprecise locality "Perse" (Patrick David, pers. comm.). Unlike the other species he cites, Anderson (1999) provides a pagination corresponding to volume three of the quarto edition, but related to his literature citation of volume 10 [sic]. Subsequent authors have not noted that Olivier's original description uses the generic name *Agame* rather than *Agama*. It seems likely that the original spelling was a *lapsus calami* that has uniformly been ignored. This species was not listed by Boulenger (1885).

Testudo rafcht Olivier, 1807

4^{to}: Tome 3, Ch. XXII, pp. 453–454 [454].

8^{to}: Tome 6, Ch. IX, pp. 325–328 [328].

Atlas, 3^{ème} Livraison, v; *pl. 41, figs. 1–2*.

"Depuis long-tems nous avons remarqué, tant sur le Tigre que sur l'Euphrate, une grosse tortue que nous n'avons jamais pu nous procurer. Comme elle ne venait que rarement à la surface de l'eau, qu'elle ne montrait que le bout de la tête, et qu'elle se trouvait presque toujours à une grande distance du rivage, je fus obligé

d'entrer bien avant dans le fleuve, pour l'atteindre d'un coup de fusil. Elle est représentée (*pl. 41, fig. 1 et fig. 2*).

Les Arabes la nomment *rafcht*. Ils prétendent que sa chair n'est pas bonne à manger, mais que sa graisse est excellente pour guérir les dartres et autres éruptions cutanées.

La longueur de tout l'animal était de trois pieds. La carapace ou la partie supérieure du test (*fig. 1*) avait un pied sept pouces six lignes de long, et un pied deux pouces de large. Elle était lisse, peu convexe, ovale, plus large en arrière qu'en avant, et d'un vert foncé-obscur. Le milieu était corné, solide, avec les bords latéraux et la partie postérieure mous et coriaces.

Le plastron ou la partie inférieure du test (*fig. 2*) n'avait que dix pouces six lignes de long. Il était corné, solide, et avait, sur les côtés, un prolongement cartilagineux qui allait joindre la carapace.

La tête pouvait rentrer entièrement dans le test, ou se prolonger d'un pied ou environ; elle était terminée en forme de museau. La mâchoire supérieure dépassait un peu l'inférieure; celle-ci pourtant s'y emboîtait avec beaucoup de justesse: elles n'avaient ni l'une ni l'autre point de lèvres, mais elles étaient armées d'une crête osseuse, très-solide, arquée en fer de cheval.

Les yeux saillaient un peu à leur partie supérieure; ils avaient un pouce d'écartement, et cinq lignes d'ouverture.

Le cou se ridait lorsqu'il était contracté, et il était un peu plus étroit que la tête lorsque celle-ci sortait entièrement.

Les pieds rentraient avec peine sous le test; les antérieurs avaient sept pouces et demi de longueur du bord de la carapace, jusqu'à la naissance des ongles: on y voyait en dessus trois ou quatre grosses rides transversales, écailleuses, et à leur bord extérieur un prolongement de la membrane des doigts, qui allait se terminer aux trois quarts de leur longueur. Les doigts, au nombre de cinq, étaient engagés dans une forte membrane: les trois antérieurs seulement avaient des ongles; les deux autres n'en avaient aucune apparence.

Les pieds de derrière étaient un peu plus courts que ceux de devant; ils n'avaient pas de



Figure 6. Portion of plate 42 from the *Troisième Livraison* of Olivier's atlas illustrating *Agame scutellata* (= *Phrynocephalus scutellatus*) as well as arachnids.

rides écailleuses, mais, comme eux, ils avaient cinq doigts engagés dans une forte membrane, et il n'y avait de même que les trois antérieurs qui eussent des ongles.

Tous les ongles étaient blancs, forts, convexes en dessus, aplatis en dessous, et saillans hors de la membrane d'environ un pouce.

La queue avait sept pouces depuis son adhérence à la carapace, jusqu'à son extrémité: elle était très-grosse proportionnellement au volume de l'animal, et terminée en cône; elle portait en dessous, vers son extrémité, une ouverture longitudinale: c'était l'orifice de l'anús et celui des parties de la génération (1).

(1) *Testudo rafcht; loricâ dorsali viridi, obscurâ, coriaceâ, lævi; sterno minori, albo. Pl. 41, fig. 1 et 2.*

Daudin, dans son *Histoire des reptiles*, tome II, page 305, a fait mention de cette tortue d'après les notes que je lui ai communiquées."

Notes: In the octavo version, the word *lævi* in the footnote is spelled *levi*.

Remarks: The current name of this species is *Rafetus euphraticus* (Daudin, 1802) *fide* Meylan (1987). Daudin's description was based on the same type specimen as *Testudo rafcht*. See discussion in Bour et al. (1995), who reproduced the plate and cited the quarto version. Wermuth and Mertens (1961) cited the octavo version. Boulenger (1889) cited the pagination of the octavo edition. The type specimen is the male example figured in the plate, but the specimen does not appear to be extant in the Paris collection (Bour et al. 1995).

Acknowledgements. We thank the staff of the Ewell Sale Stewart Library of the Academy of Natural Sciences in Philadelphia for their assistance. David Damkaer kindly provided an advance copy of his biography of Olivier, published in 2002. Alan E. Leviton, Patrick David, Bruce Bradley, and Arne Redsted Rasmussen provided useful comments on the manuscript.

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Berlandier's Herpetology of Tamaulipas, Mexico, 150 Years Ago

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Abstract. A summary is given of the extensive notes and descriptions written by Jean Louis Berlandier, some time between 1829 and 1851, on the amphibians and reptiles encountered on excursions from his home in Matamoros, Tamaulipas, Mexico, into adjacent parts of Mexico and the United States. Special attention is given to the identities of the taxa he tried to recognize, his natural history notes, and distributional information. Of special interest are three puzzling sources to which he referred. He quoted extensively from Latin passages in a Cervantes manuscript about the amphibians and reptiles of Mexico, yet the manuscript is unknown. He also referred to accounts of amphibians and reptiles in the manuscripts of Sessé and Mociño (usually cited by Berlandier as Mociño and Sessé), yet those notes have never come to light. Finally, he frequently cited a "Dr. Wurth" as an authority for numerous names of local amphibians and reptiles; no such person is known.

Jean Louis Berlandier was a French naturalist, born perhaps in 1803, in Fort de l'Ecluse, near Geneva, Switzerland. He spent the last half of his life in Mexico, settling in Matamoros, Tamaulipas. There he wrote profusely on plant and animal life observed within a range of several hundred miles. Among his voluminous writings is an extensive, incomplete manuscript of 219 pages (numbered as received from the Smithsonian Institution, and perhaps not reflecting the original order or content), written mostly in French but partly in Latin, mostly on reptiles and amphibians of the Matamoros region, although he collected also in San Luis Potosí, Nuevo León and Coahuila. The manuscript is accompanied by 17 color plates, although 31 were planned according to two lists (pp. 7–15). There is also a list of 20 plates of fishes (pp. 16–19), although those plates are not in the manuscript examined.

Our account concerns the Smithsonian manuscript, so designated in the following pages, the original of which is in the archives of the Smithsonian Institution. In addition we have a handwritten English translation of some of the natural history notes that accompanied Berlandier's species accounts. It was made by Kennerly (1830–1861) some time after 1853

(see References). The original Kennerly manuscript, so designated in the following pages, is now in the private library of Kraig Adler (Cornell University, Ithaca, New York). Kennerly was a member of the U.S.–Mexican Boundary Survey Commission, as was Lt. Darius Nash Couch (1822–1897), who purchased Berlandier's voluminous writings and specimens in 1853 following Berlandier's death in 1851. Those materials were dispersed to various institutions, largely the Smithsonian, but also to Harvard, Texas and Yale. We have quoted liberally from Kennerly's translation (1853–1861), made from the Smithsonian manuscript. References for the current scientific names here cited may be found in Dixon (2000).

The Berlandier material in the Smithsonian archives is astoundingly voluminous: their catalog includes "correspondence, manuscripts on comparative anatomy, birds, botany, fishes, invertebrates, mammals, meteorology, reptiles and amphibians; four volumes on zoology; a geographical journal; astronomical, barometrical, cyanometrical [pertaining to measurements of the intensity of the blue of the sky], and meteorological data; sketches and watercolor paintings of birds, fishes, invertebrates, mammals, reptiles and amphibians; a manuscript on

Indian mummies; *Memorias de la Comisión de Limites a los Ordenes del General Manuel Mier y Terán*, co-authored by Berlandier and General Mier y Terán; handwritten manuscripts collected by Berlandier, including a Spanish-Latin dictionary on medicinal plants, and catalogs kept by Berlandier of his manuscripts and scientific collections sent to Europe or kept by him.”

An excellent account of Berlandier’s career appears in Geiser (1948), on which the following historical account for Berlandier is drawn. The most notable published records of his explorations with the French boundary commission in Mexico and Texas are in Berlandier and Chovell (1989, reprinted from 1850) and Berlandier (1980, translated from a manuscript completely different from the one in Berlandier and Chovell).

The background of the Smithsonian manuscript begins with Berlandier, an impoverished youth, arriving in Geneva to make his way in the world. Active and eager, he apprenticed himself to a pharmaceutical house, during which time he learned Latin and Greek on his own. The great Genevan botanist Auguste-Pyrame DeCandolle noted his intellectual energy, and took him under his wing. For two or three years Berlandier studied under DeCandolle, writing a monograph on the gooseberries that became a part of DeCandolle’s magisterial *Prodromus*. He also studied under DeCandolle’s artist, developing illustrative skills, even as he continued his pharmaceutical apprenticeship.

DeCandolle was so impressed with Berlandier that he arranged for him to accompany a French Boundary Commission created to work with the Mexican government surveying and establishing the boundary between Mexico and the United States. His duty was to collect plants and send them back to DeCandolle for study. The Commission left from France in 1826, when Berlandier was but 23 years old. It landed at Pánuco, Veracruz, and then proceeded to Mexico

City, where a year was spent getting funds and arranging affairs to everyone’s satisfaction. The Commission finally started its trek to the border area in late 1827, arriving in the future Texas in early 1828, where its assigned work started. Arduous circuits followed through southern and southeastern Texas, under appalling conditions from heavy rainfall and diseases. Berlandier contracted malaria on May 17, 1828, and was sent to Matamoros to recuperate. Subsequently he rejoined the expedition, and in August, 1829, the Commission returned to Matamoros, and there dissolved. Berlandier did not return to Europe, but remained in Matamoros for the rest of his life. He died in 1851 attempting to cross the flooded San Fernando River south of Matamoros.

The largest collection that Berlandier sent to DeCandolle while with the Boundary Commission in Texas included 188 packets of dried plants totaling 55,077 specimens; 198 packets of plant seeds; 935 insects; 72 birds; 55 jars of alcoholic material; and over 700 molluscs. Other, lesser collections and manuscripts were also sent. He was honored by many scores of plant species named for him. For the time and conditions, his collections were truly monumental.

Unaware of the difficulties of travel in the largely wilderness area explored by Berlandier, DeCandolle expected more; he wrote letters highly critical of his work not only to Berlandier but to other great botanists of the time, such as Asa Gray, who scorned Berlandier’s assumed dishonesty. After settling in Matamoros, Berlandier never had further contact with his one-time mentor.

DeCandolle’s vehement and totally unjustified disapproval so discouraged Berlandier that he did not attempt to set the record straight (Geiser, 1948), closing the door to the illustrious future that his talents merited. Nevertheless, his creative spirit was insuppressible, even though he worked in essentially total professional isolation with virtually no facilities whatever.

Although professional respect eluded him, as a naturalized Mexican citizen he gained the respect, admiration and affection in his adopted home that he could not achieve academically. He adopted the Spanish spelling of his given names (Juan Luis), married a Mexican woman, fathered a number of children, and served as a physician and pharmacist in Matamoros. He was of international importance, in charge of the hospitals of Matamoros and as an interpreter between Mexican and United States officials during the Mexican war and subsequently.

Berlandier published, or had published posthumously for him by various editors, some of his manuscripts concerning Mexico and Texas (Berlandier, 1840, 1844, 1857, 1948, 1969, especially 1980; Berlandier and Chovel, 1850, 1989), but the account of the French Border Commission's exploration (Berlandier and Chovell, 1850, reprinted 1989) is the only published work of which we are aware in which Berlandier commented on reptiles. A translation of that short account, including its introductory material and species descriptions, follows.

"Many species of this class [Reptilia], some unknown, are found in this state [Tamaulipas]. Some serve as food, but most are feared for the mortal venom in their wounds. Various turtles occur, as many in the sea and rivers as on the plains of Tamaulipas. We are aware of two species of terrestrial turtles, two of them notable for the prolongation of the plastron, forming two projections more or less elongate, according to the species. [One of these is *Kinosternon*, which has no projection like that of *Gopherus*.] The tortuga tuberculosa (*Testudo tuberculatu* [sic]) is distinguished from all others by the two posterolateral tubercles on the throat. The tortuga bicolor (*Test. bicolor*) is the smallest and darkest. The tortuga verde ó franca (*Test. mydas*) is the largest species known on the Mexican gulf.

"They are the principal source of meat for the indigenous fishermen on the coasts of Texas, in

the fishing season. Mociño and Sessé found the same species on the Pacific coasts, and stated that it was the most common food of the indigents there. The turtles that I could examine were about five feet long and about two and a half wide. This species is distinguished by its green carapace, covered by twenty-six marginal scales, and thirteen centrals. The green turtle is found in almost all tropical seas: many times it emerges from the Mexican gulf with the tides to rest on the hard banks of Bahama, where it has multiplied and is fished abundantly.

"La tortuga blanda (*Trionyx ferox* Geoff.) inhabits all fresh waters and most of the northern rivers of the state. This very fierce and agile species is found from Georgia, Florida and Luisiana [sic] to Guyana, where it reaches a large size. In Texas it reaches no more than seven or eight pounds at most. Its great voracity makes it easy to catch.

"I think that we have two entirely distinct species of caiman. The caiman of Tampico appears different from that of Texas. That is understandable because no caimans occur in the Río Bravo del Norte. The caiman of Texas, which I have observed several times, has been determined as *Crocodilus Lucius* of Cuvier – the same as inhabits the swamps of Luisiana. In June the young are one and a half to two feet long, and many are found in the pools along the Trinidad and Guadalupe rivers.

"The Mexican chameleon has no relationship whatever with the Mexican chameleon [sic], even though both have been the object of ridiculous beliefs. [We think that Berlandier here had two species of *Phrynosoma* in mind: *P. orbiculare*, which he no doubt had seen around Mexico City, and *P. cornutum*, seen around Matamoros. However, he was apparently influenced to use the name *P. orbicularis* for the latter species by Dr. Wurth. Thus both were referred to here as the Mexican chameleon. Dr. Wurth's name appears in several of the following accounts; he apparently was a consultant. We do not know his identity.] Linnaeus has

made this reptile known as *Lacerta orbicularis*, and Daudin made a new genus of it with the name *Tepaye* [a lapsus for *Tapaya*], derived from *Tepeyaxin*, its native Mexican name.

“The giant *Boa*, of the snakes, is completely absent in the state, but instead we have a snake no less formidable, although smaller. It is the rattlesnake, very well described in the manuscript of the Mociño and Sessé expedition. These two naturalists already knew this rattlesnake of the Estados-Unidos del Norte as having been known to Linnaeus, who named it *Crotalus Durissus* [however, the Smithsonian manuscript gives it the name of *Crotalus horridus*; Berlandier’s names were often inconsistent, changing with understanding]. Field workers have a skill in capturing it alive, calming it until the head can be grabbed. The bite is mortal, and many workers and travelers have been victims of its venom. The still nomadic indigents know a plant whose roots have the name of *Raiz del Indio* and is an excellent antidote. The root is chewed and the mixture with saliva is placed on the wound. We have not seen said plant, and cannot make it known to humanity.”

Description of the Smithsonian Manuscript

In view of the apparent fact that Berlandier had never been trained in herpetology, his attempts to deal with the subject are a tribute to his insuppressible interest in both plant and animal life. At his time, it was impossible to do the taxonomic work to which he aspired without the resources of a major reference center. There were no synoptic works on the herpetology of Mexico, and Holbrook’s North American Herpetology (1836–1840) was probably unknown to him. Lacking institutional contacts, his knowledge of the literature was very limited. Therefore most of the reptiles and amphibians he collected were described as new species. Most actually had been named by that time, but others not. With no means of publishing the manuscripts he wrote, he must have realized that

what he was doing was essentially for self-satisfaction. It bolstered the self-confidence that had been shattered by disapproval of the man who had nurtured his intellectual development.

The manuscript consists mostly of descriptions in no apparent order of the various species of amphibians and reptiles with which Berlandier was familiar. Included in the manuscript as provided are two Latin descriptions of birds (*Ardea nycticorax*, pp. 91–92, *Charadrius vociferus*, pp. 94–95), a description of a centipede (*Scolopendra*, pp. 216–218), and a blank page (219) with the entry of the fish name “*Anguilla*, Pl. 22”.

Berlandier referred frequently to reptile species in an unknown (Fernando Pérez and Pelayo Pópez, 1987) manuscript of the 1787–1804 Sessé and Mociño expedition, written by its zoologist, José Longinos Martínez, a difficult and intractable person who parted from the expedition a few years after it arrived in Mexico. He remained in Mexico rather than returning to Spain with the rest of the expedition’s personnel, dying in Cd. Campeche in 1803. The Longinos manuscript remains to be found.

The Smithsonian manuscript also surprisingly includes 24 lengthy descriptions in Latin, copied by Berlandier from an unknown Cervantes manuscript, presumably while he was in Mexico City, of various herp species stated in general terms to occur in Mexico. The writer was Vicente Cervantes (1755–1829), who accompanied the Sessé and Mociño expeditions, was long the dean of Mexican botany, and was greatly admired by Berlandier, who emotionally lamented his passing while he was in Mexico City where Cervantes had lived.

Many of the Cervantes species are in reality strictly European, but were also said to occur in Mexico. Why Berlandier included them is uncertain; perhaps they served only reference purposes, and were not intended to be a part of his personal survey. At least one (*Testudo mydas*)

was treated among Berlandier's Tamaulipas accounts. Some names, both Berlandier's and Cervantes', in the Smithsonian manuscript, have not appeared in post-Linnaean literature. Their appearance here does not make them nomenclaturally occupied. The Cervantes descriptions given were (listed in page order of the ms) of *Rana esculenta* (40), *Testudo graeca* (93), *Testudo caretta* (96), *Testudo lutaria* (97), *Testudo mydas* (98–99), *Lacerta crocodilus* (100–101), *Lacerta iguana* (102–105), *Lacerta punctata* (106–107), *Lacerta teguixin* (108–110), *Lacerta agilis* (111), *Lacerta bullaris* (112), *Amphisbaena brachiata* (113–114), *Coluber tricolor* (115–117), *Coluber mucronifer* (118), *Coluber illama-coatl* (119–120), *Crotalus durissus* (121–122), *Coluber* (123), *Coluber mitis* (124), *Coluber nasiyague* (125), *Coluber rhombeatus* (126), *Coluber pullivorus* (127), *Rana temporaria* (188), and *Rana bufo* (189). It is not our purpose to deal with these names any further.

SPECIES ACCOUNTS

The page numbers cited in the following commentaries all refer to the Smithsonian ms.

SALAMANDERS

***Axolotl mexicanus*.** No author was given for the name, in either of two different accounts (pp. 158–159, 190–193), but it appears to be Berlandier. The account was drawn in part from the literature about *Ambystoma mexicanum* (Shaw, 1789). The names *Siredon pisciformis* Shaw and *Salamandra pisciformis* Cuvier were cited as synonyms, and the range given included the lakes of Xochimilco, Chalco and the Valley of Tenochtitlán. The range in addition included the lakes of Texas, but there was no mention of observation in Matamoros or Tamaulipas. The Texas examples he saw were *Ambystoma tigrinum mavortium* Baird (1850), and at least part of the two descriptions given must pertain to that taxon. There were no illustrations.

Siren muraenoides Berlandier. Two accounts were given (pp. 128–130, 207–209). The species was noted from the swamps of the Rio Grande, and Matamoros. Two species, *S. lacertina* Linnaeus (1758), and *S. intermedia nettingi* Goin (1942), occur in the vicinity of Matamoros (Flores-Villela and Brandon, 1992). To which of these species Berlandier's account refers is uncertain; it may refer to both, for they are not readily distinguished. There were no illustrations, and no accounts of natural history.

ANURANS

Bufo macrocephalus Berlandier. The account (pp. 205–206) lists the species from Matamoros, San Fernando and Santa Teresa, all in Tamaulipas. The figure on Pl. 9 appears to represent *Bufo nebulifer* Girard (1854). Berlandier's name reflects the strong cranial crests of this species.

Bufo marmoreus Berlandier. The description (pp. 213–215) and Pl. 13 appear to represent *Bufo speciosus* Girard (1854). The species was taken in Matamoros and elsewhere in Tamaulipas. The explanation of Pl. 13 indicates that Dr. Wurth used the name *Anurus temporivagus*, whether in jest or not. It is true that this species is a burrower seldom seen except in the breeding season, when it responds quickly to heavy, sudden thunderstorms, thereafter promptly disappearing underground.

Rana madida Berlandier. This name appeared on Pl. 11 only, and depicts *Rana berlandieri* Baird (1854). It came from Matamoros. The plate explanation listed "*Cystignathus*" as an alternative name.

Rana lineata Berlandier. This also appeared only on Pl. 17, and represents *Rana berlandieri* Baird (1854). No locality was given. A strange annotation gives the name *Cystignathus berlandieri*, attributed to Dr. Wurth.

Rana mocinii Berlandier. The description (pp. 210–213), together with the illustration on Pl. 27, leaves no doubt that the species is *Rana berlandieri* Baird (1854). The patronym *mocinii* honors José Mariano Mociño, known herpetologically for some illustrations executed during the botanically famous Sessé and Mociño Expedition, 1787–1803, to New Spain, and reported by McCoy and Flores Villela (1985). Presumably Berlandier had access to at least the herpetological parts of the Sessé and Mociño manuscript while he was in Mexico City. Those parts have never been published, although the botanical parts were published in 1887–1897 (see References).

It is strange that Berlandier seemed to recognize three species of *Rana* where there was but one — *R. berlandieri*. The descriptions probably were written at different times, to be culled when the final work was undertaken. There are several other species described twice with different names, even with an annotation that they were the same (see *Testudo bicolor*).

Rana taurina Cuvier. Seven pages (194–200) were devoted to this species, now known as *Rana catesbeiana* Shaw (1802). No illustration was given. Localities cited for it were the vicinity of the Rio Grande, Matamoros and Saltillo. Berlandier noted the sharp climatic differences between these localities. Although commonly indicated in current literature as occurring in northern Coahuila, we are aware of no other precise locality record for the species anywhere in the state. Its supposed occurrence near Saltillo, some 165 years ago, before widespread introductions took place, is of considerable zoogeographic interest.

CROCODILIANS

Crocodylus lucius Cuvier. The name *Champsalucius*, attributed to the elusive Dr. Wurth, was also used on the plate (1), which illustrates a two-foot specimen from the marshes of Texas and Louisiana. The species is, of course, *Alliga-*

tor mississippiensis (Daudin, 1802). The text is lengthy (pp. 1–6).

“This reptile inhabits all the rivers and ponds of Texas. They abound in the Río Trinidad, Sabine, Río de los Brazos de Dios, Río de Guadalupe, the San Antonio and also the Nueces. They have never been seen in the Río Bravo del Norte. [That statement supports many other reports of the absence of the alligator in the vicinity of the Lower Rio Grande (Smith and Smith, 1977: 64–66), although it may occur, or have occurred, farther west.] In June we have found the young ones abundant in Texas, measuring from one and a half to two feet in length. I do not know what is their mating season nor when they lay their eggs. In all the marshes produced by the over-flowing of the rivers, we have seen the young ones stretched on the surface of the water. Sometimes they leave their favorite element in order to enjoy the heat of the sun, and are often seen in great numbers in a state of profound sleep. At this age they are not dangerous, and the soldiers who accompanied us would go into the water and catch them. Generally at the surface [the adults] are seen immovable, showing only the tip of the snout, awaiting some prey, especially dogs, which they pursue with eagerness. When one initiates the plaintive cry of these animals when fatigued from swimming, the restless caimans may be seen searching for them in every direction. Neither in Texas nor in Louisiana has this reptile ever been known to attack man in the water or on the banks of the rivers.” (Kennerly)

Actually Berlandier knew that *Crocodylus moreletii* occurs in southern Tamaulipas, as indicated in the preceding translation of the short account of the reptiles of Tamaulipas in Berlandier and Chovell (1989). Unaccountably it was not included in the Smithsonian manuscript. Further discussion is in Smith and Chiszar (2003).

***Crocodylus abariae* ?** Cuvier. The spelling of the specific name is not clearly decipherable. The text (pp. 150–153) is the same as the first

part of the account for the preceding nominal species. Both accounts note the presence of a nictitating membrane (third eyelid), stated (in error) to be like that of *Rana ocellata*. The latter name appears nowhere else in the manuscript. It is not clear what Berlandier had in mind in citing this species. He was aware of the occurrence of *Crocodylus moreletii* in Tamaulipas, as noted in his account in Berlandier and Chovell (1989), but this account cannot apply to it, and clearly refers to *Alligator mississippiensis*.

TURTLES

Emys bicolor Berlandier. The text (pp. 183–185) and Pl. 4 confirm the identity of the name with *Trachemys scripta elegans* (Wied-Neuwied, 1838). The range given, however, from the Río Pánuco to the Sabine River, includes part of the distribution of *Trachemys venusta cataspila* (Günther, 1885), throughout all of Tamaulipas except the extreme north. The plate clearly illustrates *T. s. elegans*, however, and the text does not describe the distinctive pattern of *T. v. cataspila*.

Emyda viridis Schneider. No illustration is given, but the text (pp. 172–176) describes four costal plates on each side, making it clear, with other information provided, that the species intended is *Chelonia mydas* (Linnaeus, 1758). Indeed, Berlandier listed *Testudo mydas* Linnaeus as a synonym. No specific locality was given — just a general statement that the species ranges between 27° and 30° north latitude. A separate account under the name *Testudo mydas* was given (q.v.).

Testudo bicolor Berlandier. The description of this species (pp. 146–147) is at least in part verbatim from the description of the following species, which is undoubtedly the same. In fact Berlandier seemed to know it, because he entered the name *Testudo minima* parenthetically under the name *Testudo bicolor*. There is no illustration of either species. The range given is the same for both. “Inhabits the country along the northern and eastern coast of Mexico, from

the shores of the Pánuco to the Río Sabinas. It goes sometimes into the bushes and swamps.” (Kennerly ms) Measurements were given of one example.

Testudo minima Berlandier. There is no illustration of this species, but the description (pp. 20–22) leaves no doubt that it is *Kinosternon flavescens* (Agassiz, 1857). “Inhabits the great, dry, sterile and sometimes inundated plains which separate Matamoros from San Fernando de las Presas on the coast of the Gulf of Mexico in the state of Tamaulipas. This tortoise, which never attains a large size, appeared to be herbivorous, and endowed with remarkable agility.” (Kennerly)

Testudo mydas Linnaeus. The account given for this name (pp. 143–145) lacks an illustration. The species involved is *Chelonia mydas* (Linnaeus, 1758), as indicated by the description of four costal plates on each side. The measurements given of a single specimen is the same as those for his *Emyda viridis* (e.g. carapace 3 feet), but a size range was given of 6–7 feet. One shell was observed to serve as a canoe in the coastal marshes, manned by two Indians. The turtles were described as being fished daily in the Gulf, and the fishermen working the Bay of San Bernardo relied heavily on these turtles as food. Occurrence in Veracruz and the mouth of the Rio Grande and Brazos River, as well as the inner passage of the Padre Island barrier, where the fishermen destroy huge numbers, is mentioned. Only in June and July were the turtles observed, when they came ashore to lay their eggs. Berlandier noted that there is a copious secretion about the eyes when the turtles are on land, when they keep the third eyelid closed. Sessé and Mociño were cited for recording the species along the Pacific coast of Mexico.

Testudo tuberculata Berlandier. Accounts are given pp. 148–149 and 168–171, and the species is illustrated on Pl. 5. There is no doubt that this is *Gopherus berlandieri* (Agassiz, 1857). The stated occurrence is in Tamaulipas, in the area between Matamoros and San Fernando.

Around Laredo it was stated to be an important source “of food for the soldiers of the forts when crossing the desert. It is herbivorous.” (Kennerly)

***Trionyx ferox*.** No author was given either in the text (pp. 177–179) or on Pl. 6. The identity is unquestionably *Apalone spinifera emoryi* (Agassiz, 1857). The species was stated to occur in the rivers of Texas, including the Río Grande, and much of Tamaulipas, as well as in Nuevo León. “They lay their eggs from March even to June; I have seen them deposited in the sand on the edges of the Río Bravo del Norte. They are entirely white, hard and spherical.” (Kennerly)

LIZARDS

Lacerta lineata Berlandier. Two accounts are given under this name, on pp. 141–142, and 180–182. An illustration is on plate 3. The taxon is now known as *Aspidoscelis gularis gularis* (Baird and Girard, 1852) (genus fide Reeder et al., 2002, formerly *Cnemidophorus*). Dr. Wurth called it “*Teyus sex-lineatus*”. “This reptile inhabits the barren and dry places in the vicinity of the Río Bravo del Norte near Matamoras, Reynosa, Mier, Revilla etc., and perhaps the entire state of Tamaulipas. It is harmless and is called lagartija.” (Kennerly)

Phrynosoma orbicularis fide Dr. Wurth. Berlandier credited the identification to Dr. Wurth, and supplied no other scientific name. The text is in two parts; pp. 23–31 used the rubric *Phrynosoma orbicularis*, whereas pp. 201–202 used the colloquial name tapaye (*sic*). The illustration, Pl. 2, clearly depicts *Phrynosoma cornutum* (Harlan, 1825). The species was noted specifically from Matamoras, and was said to occur from the vicinity of Mexico City [Tlalpam] to Texas – “a space of more than eight degrees of latitude.” (Kennerly). Not distinguishing the Matamoras species from *P. orbiculare*, Berlandier quoted extensively in the account on pp. 23–31 from Cervantes’ Latin description of *P. orbiculare*. Following that is a

description in French of *P. cornutum*. The common name was stated to be Tapayaxin or Cameleón. The account pp. 201–202 is in French, and supplementary to the earlier account.

Berlandier noted that the lizard eat ants almost exclusively, supplemented a little by other insects. He thought that they do not hibernate in winter, but are active year around. He described the eggs, stated that they are about twenty in number, and regarded the hatchlings as hornless. He made no comment about squirting blood from the eyes.

Scincus bonplandii Berlandier. The text (pp. 44–47) and illustrations (Pls. 3, 9) leave no doubt that the species is *Eumeces obsoletus* (Baird and Girard, 1852). The only locality cited is Matamoras. Berlandier observed but a single specimen, which, as illustrated, had lost most of its tail. He regarded it most remarkable and very rare.

***Stellio* ?** No attempt was made to apply a definitive name to this species, described pp. 32–34, and illustrated on Pl. 14. The distribution was stated to include much of Tamaulipas, and in town in Matamoras. The species is *Sceloporus olivaceus* Smith (1934). “This reptile has been called escorpión by the inhabitants of the country because of its habit of ejecting to a distance a saliva, not venomous, when it pursued or captured. Like the Tepayaxin it puffs itself out, but not to so great a degree.” (Kennerly)

***Stellio* ?** Lizards were not a favorite subject for Berlandier. This species is *Sceloporus variabilis marmoratus* Hallowell (1852). It was said to occur in much of Tamaulipas, and in the town of Matamoras.

SNAKES

***Coluber*.** No scientific name was given in the description (pp. 132–134) and there is no plate. The description makes it clear that the snake is *Salvadora grahamiae lineata* Schmidt (1940).

It was stated to occur about human habitations in Tamaulipas.

Coluber constrictor. No author was given for this name, which may have been derived from "*Coluber constrictor flavescens subsp. nov.* Dr. Wurth", which was cited as a synonym of *Coluber constrictor* in the text (pp. 76–78) and on Pl. 10. Other synonyms cited in the text were *Coluber pullivorus* "Mociño and Sessé" (manuscript) and *Coluber hydrofila affinis* Berlandier. The ventrals were given as 185, subcaudals 55. The species concerned was *Drymarchon melanurus erebennus* (Cope, 1860). It was stated to occur in moist and shady places near water in the vicinity of Matamoros and perhaps throughout Tamaulipas, and was known colloquially as Culebra negra. The description of its habits conforms with what is known of the species: "This reptile acquires a considerable size. The one which has been the subject of our description was five feet and eleven inches in length, and was not one of the largest. The inhabitants of the country have assured me that the culebra negra is more poisonous than the *Crotalus durissus*. As it is fond of the flesh of the latter, it pursues it and often kills it by a single wound. It feeds also on small quadrupeds, and goes sometimes about houses seeking chickens and eggs. It emits a musk-like odor." (Kennerly)

Coluber griseus Berlandier. The text is on pp. 88–90, and the species is illustrated on Pl. 7. Two garter snakes are illustrated on that plate; the prominent labial markings and relatively short tail of the illustration for this species (*Thamnophis m. marcianus* (Baird and Girard, 1853)) readily distinguish it from the long-tailed *Coluber lineatus* (*Thamnophis proximus orarius*).

Coluber hydrofila Berlandier. By Berlandier's own admission, this species is the same as his *Coluber constrictor*, which we identify as *Drymarchon melanurus erebennus* (Cope, 1860). He gave the colloquial name as Culebra azul, a name commonly applied, anglicized, to *Coluber constrictor* in the United States. The

text (pp. 69–70, 156–157) gives the ventrals as 188, subcaudals as 63. Pl. 28 not only identifies the figure as that of *Coluber hydrofila*, but also as *Oligodon*, of the Dendrophilinae. The range was stated to be throughout the plains of Tamaulipas and Texas, around Matamoros and near the Bay of Espíritu Santo.

Coluber lineatus Berlandier. Three accounts (pp. 85–87, 131–132 and 186) and Pl. 7 pertain to this species. Although the scale counts given (ventrals 170–188, subcaudals 69–86) differ somewhat from those given by Rossman *et al.* (1996), the plate, showing a very long tail, and pattern description assure identification as *Thamnophis proximus orarius* Rossman (1963). Occurrence about the Rio Grande, Matamoros and much of Tamaulipas is noted. An alternative name was entered on the plate, "*Psammophis liacereus* ?", and the subfamily assigned was Psammophidinae

Coluber maculatus Berlandier. There are three accounts of this species, on pp. 66–68, 73–75, and 162–163. It is illustrated on plate 10. The plate gives the subfamily as Colubrinae, and notes that Dr. Wurth considered it a new species. The scale counts given are 224–226 ventrals, 56–57 subcaudals. These counts and the illustration assure identification as *Pituophis catenifer sayi* (Schlegel, 1837).

However, it is stated that it "Inhabits moist and shady places. It is often found in the stagnant waters or their borders in the vicinity of Matamoros. Vulgar name Culebra de agua." (Kennerly) These statements are incongruous with the known habits of this species. Confusion with *Nerodia r. rhombifera* is likely, although no account in Berlandier's manuscript is referable to that species.

Coluber matamorensis Berlandier. This species is represented by a text account (pp. 63–65) that lacks a name, and a figure on Pl. 25, where this name is followed by another, *Oligodon matamorensis* Berlandier. The snake was placed in the subfamily Dendrophinae. The taxon is

Leptodeira s. septentrionalis (Kennicott, 1859). The plate states that the illustrated specimen was from Matamoros, but the text states that the species occurs “in the forests of Texas in the vicinity of Bexar” (= San Antonio), where it is not known to occur (Dixon, 2000).

Coluber mexicanus Berlandier. A fairly extensive description appears on pp. 71–72, and a very brief one on p. 137. The first bears a marginal query “*Elaps*?” The text and the figure on Pl. 28 make it evident that the species involved is *Lampropeltis triangulum annulatus* (Cope, 1860). Berlandier described it as highly venomous, but it is not evident that he properly distinguished the species from *Micrurus* (see entry for *Coluber tricolor*). It is not certain that he ever saw a *Micrurus*, which does occur there. If he did, he apparently confused it with *Lampropeltis*. There is no description in the manuscript unambiguously attributable to *Micrurus*.

Coluber pullivorus Moliño and Sessé ? The description (pp. 154–155), with the scale counts of 185 ventrals and 55 subcaudals, clearly conforms with the characters of *Drymarchon melanurus erebennus* (Cope, 1860). Its large size, dark dorsum, reddish venter and the scale counts given are diagnostic, despite Berlandier’s assignment elsewhere to *Coluber constrictor*. The species was noted to occur around Matamoros and elsewhere in Tamaulipas, and to feed on other reptiles, rabbits and other small quadrupeds, as well as chickens and their eggs.

The name *pullivorus* apparently originated with Cervantes (p. 127), as given in the preceding list of Cervantes’ descriptions. The name apparently derives from supposed habits of eating chickens. It seems, however, to have been adopted by “Mociño and Sessé”, according to Berlandier, who gave 192 ventrals (as did Cervantes). Both usages may pertain to *Drymarchon*. They do not refer to *Boa constrictor*, which has many more ventrals.

Coluber surdus Berlandier. Two descriptions are on pp. 41–43 and 160–161. There is no

plate. The taxon is *Elaphe emoryi meahllmorum* Smith et al. (1994). It is stated to occur around the houses in the vicinity of Matamoros and to have the colloquial name of “*Vivora sorda*”. Some thought it to be venomous, but Berlandier assured that it was harmless.

Coluber tricolor Berlandier. There are three descriptions of this species, on pp. 82–84, 135–136, and 166–167. It is illustrated on Pl. 8, with the equivalent of *Elaps corallina* noted. All accounts give the same scale counts of 223 ventrals and 29–30 subcaudals, paired. These do not conform with those of *Lampropeltis triangulum annulata* Kennicott (1860), to which we assign it, although they are not greatly different, and the color pattern description is unmistakably that of this species. Berlandier apparently confused it with the coral snake, but both pattern and the divided subcaudals eliminate that possibility. All three accounts are closely similar. “It inhabits the vicinity of Matamoros. It makes its nest in the ground, and is said to be very poisonous. Vulg. Coralio, a name given to all snakes which have beautiful colors.” (Kennerly)

Coluberini. No name is applied to this species, and there is no plate. The name cited is on the first page of the text. The description (pp. 35–37) is of *Tropidoclonion lineatum texanum* Ramsey (1953). Its locality is given as the forests of Texas in the vicinity of Bexar county.

Crotalus horridus Linnaeus. The account for this species (pp. 48–62) is the longest for any species in Berlandier’s manuscript. There is no illustration. Found in central and southern Texas as well as in Tamaulipas, it is *Crotalus atrox* Baird and Girard (1853). The account of natural history and folklore is treated elsewhere (Chiszar, Conant and Smith, 2003).

Heterodon simus. The caption to plate 8, illustrating this species, attributes this name to “Dr. Wurth.” A synonym of the name in the text (pp. 79–78) is given as *Trigonorostrus* (superimposed over a *Trigonocephalus*) *griseus* ?

Berlandier (*q.v.*). The caption for the plate noted the subfamily Heterodoninae for the taxon, which is clearly *Heterodon kennerlyi* Kennicott (1860). Ventrals were stated to be 134, subcaudals 40. Occurrence in the vicinity of Matamoros and perhaps all of the plains of Tamaulipas was mentioned. "I have been assured that this reptile is more poisonous than the rattlesnake. It moults its skin in August and September. At night it makes a hissing noise when the weather changes." (Kennerly)

***Trigonocephalus griseus* ?** Bertrandier. Aside from a Latin diagnosis (French in the account for *Heterodon simus*), this account (pp. 164–165) is virtually verbatim for the one for *Heterodon simus* (*q.v.*). The generic name was written as *Trigonorostrus* in the preceding account. The species dealt with was *Heterodon kennerlyi* Kennicott (1860).

***Typhlops*.** No species or author was recorded. The text (pp. 38–39) and Pl. 25 leave no doubt that the species was *Leptotyphlops dulcis dulcis* (Baird and Girard, 1853). It was recorded from Matamoros, where "it is found in the earth about the trunks of trees, fence posts, etc." (Kennerly)

***Viperides*.** No scientific name was applied to this description (pp. 203–204), and there is no illustration. The name applied was probably a lapsus, because the description leaves no doubt that the species at hand was *Masticophis flagellum testaceus* (Say, 1823). The ventrals were given as 185, subcaudals 109. The colloquial name was alicante, and the animal was described as having extraordinary agility.

Discussion. This manuscript dealt with 38 names, 21 of which were new; 26 had not been acceptably named before 1852. At the species level, 29 species as now understood were treated, of which 17 had not been described by 1851. Dixon (2000) listed 92 species for Cameron Co., Texas, or immediate vicinity, across the border from Matamoros. Bertrandier wrote about 32% of that number.

Comparing the species as now understood dealt with by Bertrandier with the number cited for the area by Dixon (2000), the representation is the poorest for anurans (19%), and the lizards fared little better (22%). The crocodilian percentage is the best, of course (100%), and the salamander representation was high (67%), but fewer species of those two groups are known in the area. Of the turtles, 45% was represented, and of the snakes, 36%.

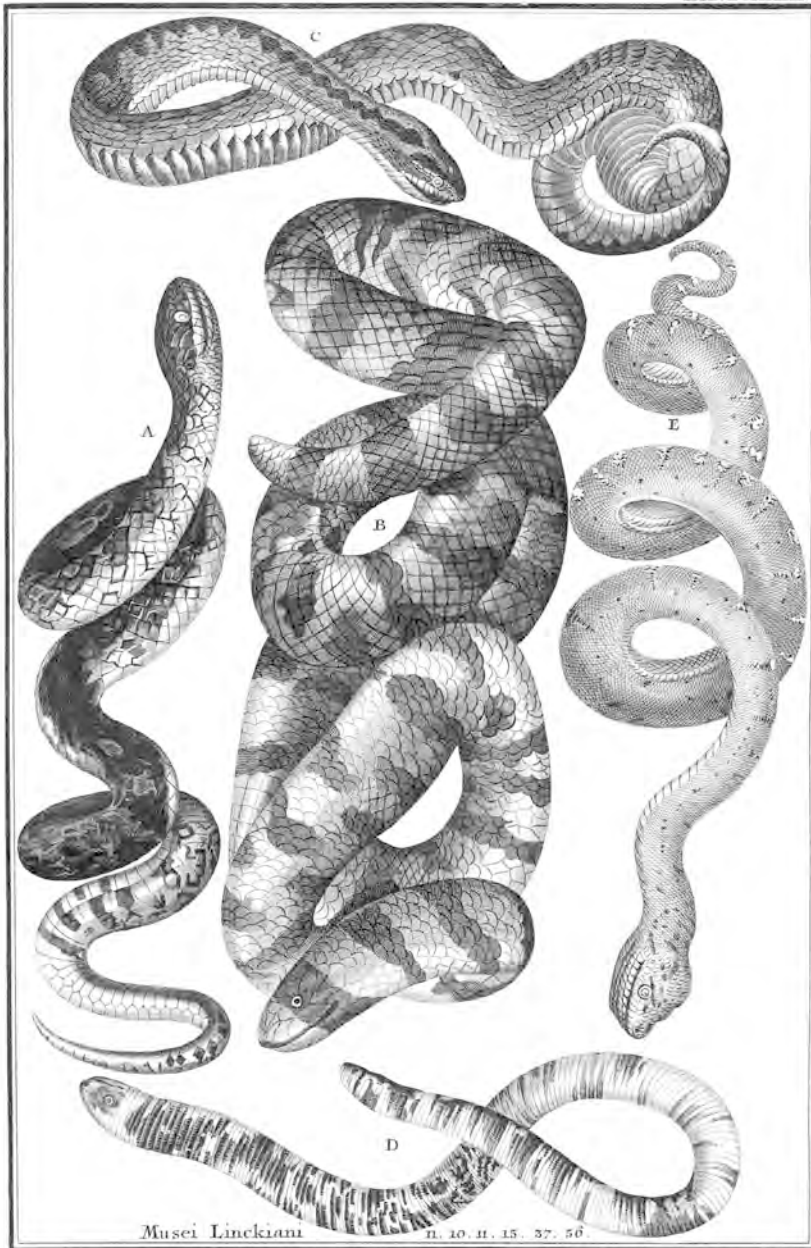
Three names, all new, were applied to one species (*Rana berlandieri*), two (both new) to *Kinosternon flavescens* and *Lampropeltis triangulum annulata*. Three names, one new, were applied to *Drymarchon melanurus erebennus*; two, one new, to *Heterodon kennerlyi*; two, none new, to two (*Chelonia mydas*, *Alligator mississippiensis*); and none to five (*Sceloporus olivaceus*, *S. variabilis marmoratus*, *Masticophis flagellum testaceus*, *Salvadora grahamiae lineata*, *Tropidoclonion lineatum texanum*).

Acknowledgements. We are much indebted for the bibliographic aid of Drs. Oscar Flores Villela and Bruce D. Smith; to Kerry Clendenen for help with translation of French passages and WWW searches; to Dr. Gerald Rosenzweig of the Smithsonian Institution Archives for a xerox of Bertrandier's manuscript; and to Dr. James B. Murphy, David Burgevin and William Cox for information about the manuscript plates. Identification of Bertrandier's species was greatly enhanced by the summary works of Conant and Collins (1998), Dixon (2000), Rossman et al. (1996) and Werler and Dixon (2000). We are most grateful for the vital critiques provided by an anonymous reviewer, George A. Middendorf and Ralph Tramontano

The text for *Rana taurina* provides the only precise record of which we are aware of *Rana catesbeiana* in Coahuila. It possibly implies native occurrence in that area.

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Musei Linckiani

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IEREM. Cap. LI. v. 34.
Serpentes.

Serpent. Cap. LI. v. 34.
Schlangen.

J. G. Pütz sculp.

Plate No. 629 of J. J. Scheuchzer's *Physica sacra*. See "About the Cover", pp. 5-6.



International Society for the History and Bibliography of Herpetology

Newsletter and Bulletin

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